**Name: \_\_\_Khan Arshad Abdulla\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No: \_\_\_20CO24\_\_\_\_\_\_\_**

**Class : SE-CO Semester : IV Scheme : Course Code : CSL403**

**Programme :** Computer Engineering **Batch :** 2021 - 2022 **Course : Operating System Lab**

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| **Sr No** | **Experiment Title** | **Page No.** | **Evaluation Parameter** | | | | **Total (15)** | **DOP** | **Sign** |
| **Exec(8)** | **Viva(3)** | **On time(2)** | **Pres.(2)** |
| 1 | Explore usage of basic Linux Commands and system calls for file, directory and process management. For eg: (mkdir, chdir, cat, ls, chown, chmod, chgrp, ps etc. system calls: open, read, write, close, getpid, setpid, getuid, getgid, getegid, geteuid. sort, grep, awk, etc.) |  |  |  |  |  |  | **27/01/2022** |  |
| 2 | Write shell scripts to do the following:  a. Display OS version, release number, kernel version  b. Display top 10 processes in descending order  c. Display processes with highest memory usage.  d. Display current logged in user and log name.  e. Display current shell, home directory, operating system type, current path setting, current working directory |  |  |  |  |  |  | **3/02/2022** |  |
| 3 | Implement any one basic commands of linux like ls, cp, mv and others using kernel APIs. |  |  |  |  |  |  | **10/02/2022** |  |
| 4 | Create a child process in Linux using the fork system call. From the child process obtain the process ID of both child and parent by using getpid and getppid system call. |  |  |  |  |  |  | **22/02/2022** |  |
| 5 | Write a program to demonstrate the concept of preemptive scheduling algorithms & non-preemptive scheduling algorithms. |  |  |  |  |  |  | **8/03/2022** |  |
| 6 | Write a program to implement solution of Producer consumer problem through Semaphore |  |  |  |  |  |  |  |  |
| 7 | Write a program to demonstrate the concept of deadlock avoidance through Banker’s Algorithm |  |  |  |  |  |  |  |  |
| 8 | Write a program in C demonstrate the concept of page replacement policies for handling page faults eg: FIFO, LRU etc. |  |  |  |  |  |  |  |  |
| 9 | Write a program to demonstrate the concept of dynamic partitioning placement algorithms i.e. Best Fit, First Fit, Worst-Fit etc |  |  |  |  |  |  |  |  |
| 10 | Write a program in C to do disk scheduling - FCFS, SCAN, C-SCAN |  |  |  |  |  |  |  |  |
| 1 | Assignment 1 |  |  |  |  |  |  |  |  |
| 2 | Assignment 2 |  |  |  |  |  |  |  |  |

Course Owner

(Prof. Mukhtar Ansari)